AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

Claims 1-22 (Cancelled).

23. (Currently Amended) ~~The apparatus of claim 22,~~ An apparatus for communicating, comprising:

a first transmit device that transmits a set of first training symbols; and

a second transmit device that transmits a set of second training symbols;

wherein a cross-correlation estimate between the set of first training symbols and the set of second training symbols is essentially zero, whereby a channel estimation is achieved without performing a matrix inversion;

wherein the set of second training symbols is substantially identical to the set of first training symbols with a phase shift;

wherein the set of second training symbols is related to the set of first training symbols according to:

$$t_2[n,k] = t_1[n,k]W_K^{-kl_o},$$

where $t_1[n, k]$ is the set of first training symbols, $t_2[n, k]$ is the set of second training symbols and

$$W_K^{-kl_o} = \exp(-j\frac{2\pi kl_o}{K}),$$

where n is an ODFM block, k is an OFDM sub-band, K is a total number of OFDM sub-bands and l_o is a reference frequency.

Claims 24-27 (Cancelled).

28. (Currently Amended) ~~The apparatus of claim 27,~~ An apparatus for communicating, comprising:

a receive device that receives at least a set of first training symbols transmitted by a first transmit device and a set of second training symbols transmitted by a second transmit device; and

an estimator that estimates at least a first channel related to the first transmit device based on at least the set of first training symbols;

wherein a cross-correlation estimate between the set of first training symbols and the set of second training symbols is essentially zero, whereby a channel estimation is achieved without performing a matrix inversion;

wherein the estimator further estimates the first channel based on at least the set of second training symbols;

wherein the estimator estimates the first channel without using a matrix inversion;

wherein the set of second training symbols is substantially identical to the set of first training symbols with a phase shift;

wherein the set of second training symbols is related to the set of first training symbols according to:

$$t_2[n,k] = t_1[n,k]W_K^{-kl_0},$$

where $t_1[n, k]$ is the set of first training symbols, $t_2[n, k]$ is the set of second training symbols and

$$W_K^{-kl_0} = \exp(-j\frac{2\pi kl_0}{K})$$

where n is an ODFM block, k is an OFDM sub-band, K is a total number of OFDM sub-bands and l_0 is a reference frequency.